



**BUILDING &
ENVIRONMENTAL
CONSULTANTS**
a division of TTC Experts



BEC serves owners, builders, contractors, suppliers, insurers, and the legal community with top technical experts and industry leading testing resources. BEC maintains a staff of experts and collaborators from industry and leading universities. We address all building-related issues, including building facades, roofing systems, wall systems, foundations, windows and building fenestration, curtain walls, and interior gypsum drywall and plaster systems. We investigate and identify building deficiencies attributed to design, construction, deferred maintenance, and/or owner operation that lead to problems of building distress, water intrusion, mold and rot, and costly damages. We provide investigations, problem solving, design of repairs, field observation and contract administration services for all types and sizes of buildings.



BEC helps you better handle the potentially major economic impact of building problems, insurance claims, and litigation.

BEC's investigations are thorough and based on scientific methods that utilize document review, visual inspection, invasive openings, field testing, material property evaluations, codes and standards assessments, and evaluation of design, construction methods, maintenance, and building operation. Testing, whether in the laboratory or the field, is performed under realistic and representative service conditions. We also have the capability to employ modeling and simulation to assess the hygrothermal performance of the building enclosure.

Building & Environmental Consultants

We utilize industry-leading project management techniques based on innovative collaborative procedures and custom Internet-based tools. Each project has a password protected web site that contains all of the relevant documents and inspection images, thus providing all parties (who are provided with permission) access to this information without concern about not having the latest versions. Time and expenses are also entered on this site and are available to the client for continuous oversight of costs and progress if desired.



Accidents and failures leave clues that appear to be clear in their meaning, but can be misleading if used without an informed investigation. A leak may be obvious, but the cause or moisture source is not. The cause could be due to a design deficiency, poor installation, materials or manufacturing defect, improper owner operation, or some combination of these. To sort this out and understand the cause with confidence, you need an expert with broad knowledge of codes and standards, design requirements, building component functions and limitations, installation methods, the performance and wear of materials, maintenance requirements, and extensive investigation experience.

A good investigation will systematically cut through the uncertainty of an accident or failure and bring clarity and authority. This is done by using the scientific method, which is the historic method for conducting technical inquiries and also is the standard set by the Supreme Court for expert investigations. The scientific method starts with making observations, not with conjecture about what happened. The observations include gathering information through field inspections, research on the design and installation, materials and their properties, maintenance requirements, actual maintenance and repair history, and the events of the accident or failure. Field and laboratory testing with specialized equipment and modeling may also be required. The observed data is then used to develop hypotheses of what went wrong. Hypotheses are tested based on facts in evidence to establish opinions of failure and responsible parties.

This sort of investigation may seem expensive, but - regardless of the complexity of the incident - this sort of investigation is actually far less expensive and far more effective than conducting an investigation based on unfounded hypotheses of what went wrong. Clarity and authority come from describing the foundational information that led to the hypothesis and by showing that the hypothesis predicts and explains what was observed in the accident or failure based on facts in evidence.

BEC provides the highly experienced specialists that you need to explain complex issues in clear and credible terms that make sense.

Litigation Expert Witness Investigations

Insurance Investigations

Design of Repairs

The BEC Advantage Gives You:

- Highly credentialed technical staff with broad industry experience.
- Access to specialized resources from top universities, government, technical societies, and industry.
- A thorough investigation, and credible answers and solutions you can trust.